Re-imagining Social Security

Future Systems Technology Advisory Panel

Report, June 2010

Introduction

The Commissioner of Social Security asked the panel for advice and guidance to assist the agency in determining future systems technology options that would improve the agency's ability to serve the American people in the next 5, 10 and 20 years. Based on the Commissioner's request this report will paint a picture of how people could interact with SSA based on available future technology within those timeframes.

The panel based the following report on discussions with Social Security Administration officials, an analysis of the data and information they provided as well as independent research and information gathered by the panel. This report is an overview, subsequent panel reports on the Disability Backlog/Health Information Technology (HIT) and, Privacy, Authentication and Fraud Detection will provide in depth recommendations specific to those topics.

This document consists of three sections. The first presents recommendations based on our research, deliberations, site visits and presentations by SSA personnel. The second section presents an analysis of some of the workload and investment data provided by the agency and the third section is a scenario for how citizens might interact with the agency if SSA implements the panel's recommendations.

Recommendations:

Move to an electronic customer self-service model with the goal of moving transactions to the Internet each year until 90% of the business with SSA takes place online.

- **Provide other channels for:**
  - **Complex transactions that are not suited to online execution**
  - **Those who cannot or will not use technology**

Given the projected workload increases due to the number of individuals retiring over the next two decades and other demographic trends, electronic self-service appears to be the *only* solution that will enable SSA to process future transaction volumes. As evidenced by the FCC's policy proposal to promote and expand broadband connectivity and speeds we anticipate that the vast majority of citizens interacting with SSA will be able to do so through the Internet.

- **Develop a series of incentives to encourage and direct the public to utilize the electronic self-service model.**

Establish SSA policy to allow offering incentives (i.e., less wait time, quicker decision, etc.) to encourage the public to interact with SSA via online services.

- **Lead in developing a National Health Information Network, Health Information Exchanges and the adoption of electronic medical records. Work to establish industry standards for health information data security, and the security of personally identifiable information.**

- **Encourage and subsidize the adoption of electronic medical records with connections to disability examiners in the states and to SSA.**

One of the agency's goals is to reduce the disability claims backlog and prevent the backlog from recurring. Based on discussions with SSA personnel we learned that when disability claims are denied and then appealed a great deal of study and human judgment is required and that human judgment is difficult to automate. Often times the claimant fails to identify all of their medical conditions. Sometimes they do not recall or do not supply all of the medical information needed resulting in an initial denial. A National Health Information Network would provide SSA personnel and State Disability Determination Services access to all of the claimant's medical records for review and evaluation so that the correct decision can be made at the initial stage. Therefore, as experiments have shown, electronic medical records can dramatically reduce the time on the front end required to make the initial determination and ultimately reduce the number of appeals. Promoting and implementing a National Health Information Network that includes electronic medical record will facilitate timely receipt of all the medical records upfront so that the right decision can be made at the earliest stages of the disability claims process.

- **Implement a program to automate the initial disability claim decision that would only require human review for denied claims.**

The agency is experimenting with the development of such a program. The Panel learned that at least one large Insurance company leverages information on all claims for expedited and automated decisions with claim submissions. The panel recommends continued information sharing with the private sector to explore process improvement in making disability claims decisions without compromising the outcome or quality. Implementing such a program should be a high priority as it will help reduce the cycle time for disability decisions and reduce the backlog of claims.

- **The most common tools people will use to access the internet in the future will be the Smart phone and mobile devices. These tools are predicted to replace the PC. Therefore, in designing online applications SSA should position themselves to support mobile devices and be prepared to convert internet applications to these platforms while simultaneously maintaining the current platforms for the PC.**

Smart phones and devices like the iPad are replacing PCs for convenient internet access because of the mobility they provide. While these devices have a Web browser allowing the

user to reach the SSA website and conduct transactions, dedicated applications for smart phones provide more incentives for use as they recognize the interface advantages and limitations of smart devices.

- **Develop a prototype and then production systems to distribute benefits via cell phones.**

The developing world is ahead of industrial economies in using cell phones as payment devices because many people do not have bank accounts or credit cards. Japan developed a cell phone payment system some time ago. In the U.S. there are a number of efforts underway to utilize cell phones for payments and receipts. Some of these approaches use a smart chip, a sticker with an RFID tag, or a small credit card reader. There is competition between systems that utilize the credit card infrastructure or those that create their own payments system. For example there is an iPhone application that lets two people "bump" their phones and transfer funds via PayPal accounts. As more merchants are able to accept credit card payments, the public will increasingly choose this approach over debit and credit cards and cash. SSA should be able to distribute benefits to individuals who prefer to use their cell phones.

- **Establish electronic service delivery as a strategic goal for all employees.**

  - **Create a publicity campaign to inform employees about the development and implementation of an electronic self-service model. Explain how they will benefit from the electronic self-service model and how its implementation will help the agency achieve its goals.**

  - **Hire employees at all levels with the desire, aptitude and ability to complete work assignments electronically.**

The panel suggests tying electronic service delivery to the specific business process. Determine which method is best suited for each transaction, i.e., electronic, telephone, face-to-face. Clarify and explain the agency's rationale for steering interactions via the various methods to ensure that employees have a clear understanding of how the agency's strategic goals will better assist them in performing their work. Promote buy-in by involving employees at all levels, and stress how their performance will assist the agency in achieving its goal while improving the business process. The panel learned through meetings with SSA personnel that there is a resistance within the agency to accept the electronic self-service model; many employees feel that person-to-person contact is the best way to serve the public. While there are many advantages to face-to-face interaction, the agency cannot afford to continue this approach given the increased workloads.

- **Seek legislation that would require all employers to file required documents electronically.**

The panel recommends getting legislation passed as quickly as possible with a deadline that would require employers to file documents electronically. In addition, if feasible, SSA could provide the start-up costs as an incentive and buy-in.

- **Lead a government-wide study group to discuss options with other agencies to pilot a single government service center in each region for individuals who need face-to-face service across from different agencies. (For example, IRS, SSA, INS, State Social Services, etc.)**

    - **Consider contracting-out providing the services by third parties vs. each agency. Look at the model in some state DMVs.**

The panel realizes that there will always be some complex transactions and some clients who need to interact with an SSA employee. In order to provide better service across all Federal agencies and to consolidate real estate, we suggest looking into setting up government service centers for "one stop shopping."

- **Some short-term suggestions:**

    - **Consider outsourcing some activities to third parties, e.g. libraries.**

    In order to reallocate resources from physical offices to an electronic self-service model, the agency should consider possible third parties who could provide some of the services that currently require a visit to an SSA office.

    - **Develop and implement a video capability for disability claimants at field offices and those with cameras on their PCs.**

    Explore expanding the use of video conferencing for disability hearings. Further leveraging video conferencing capabilities will help reduce the disability backlog at the hearing level while reducing cost. In addition, video conferencing will promote selective hiring across geographic regions and consistency across the country. An increasing number of computers and other devices have cameras, which would allow examiners and others widespread video communication possibilities as well.

    - **Develop video kiosks to provide service to customers**

    Video kiosks are another avenue to move customers to an electronic self-service platform. Kiosks can be set up in libraries, malls, grocery stores, and community centers to accommodate those that do not have computers in their homes. In addition, install

self-service stations at field offices where people can complete their business with SSA online without having to interact with SSA personnel.

- **Develop and make available training web videos on how to find information and complete transactions on the Internet.**

Instructional videos will help individuals learn how to interact with the agency electronically.

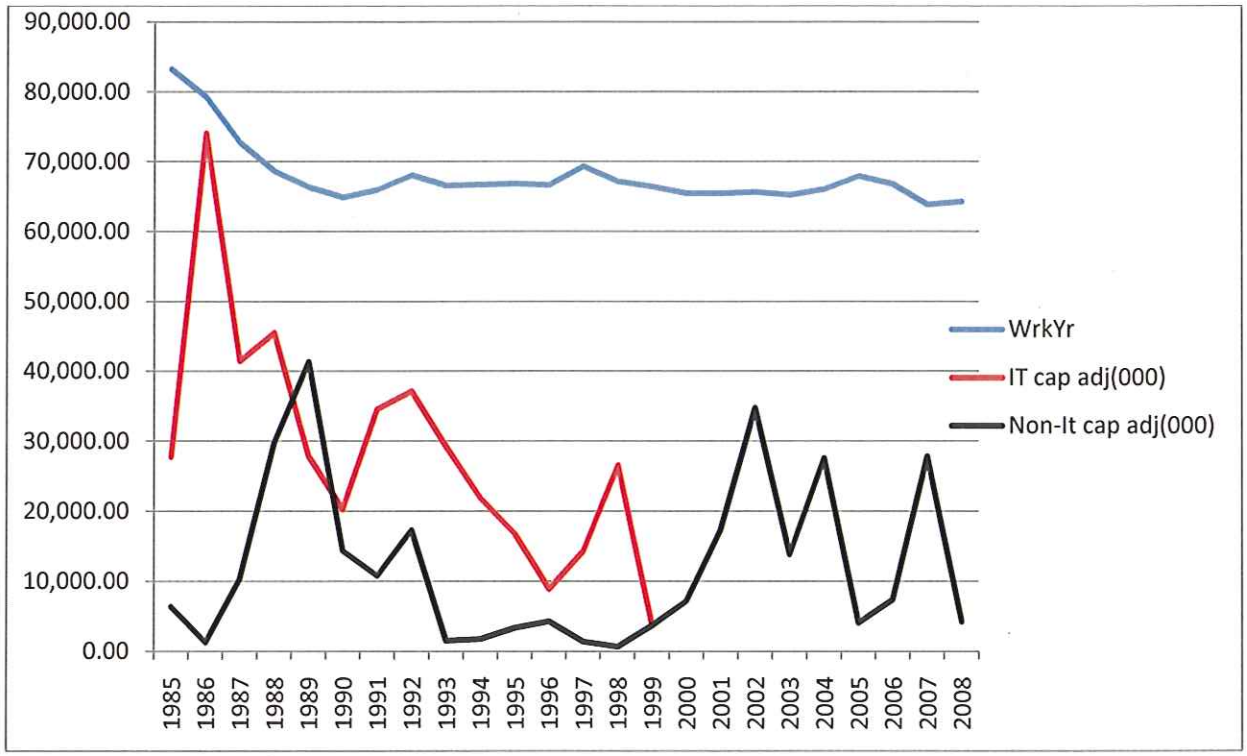
Predictions about future technology:

Blaise Heltai, Genus2 Technology, February 2010, predictions about the following future technologies helped frame the recommendations above.

- **Smart Phones with biometric identification (2012)**
- **Use of consolidated email/social networking/IM services reaches 300 million users (2013)**
- **A national ID card issued by SSA (2015)**
- **EMR adoption reaches 70% (2016)**
- **Government reorganization plan centralizes all services delivered to citizens through consolidated service centers (2019)**
- **Life vault gives every user on the planet 100 Gb of information on their lives including medical records (2020)**

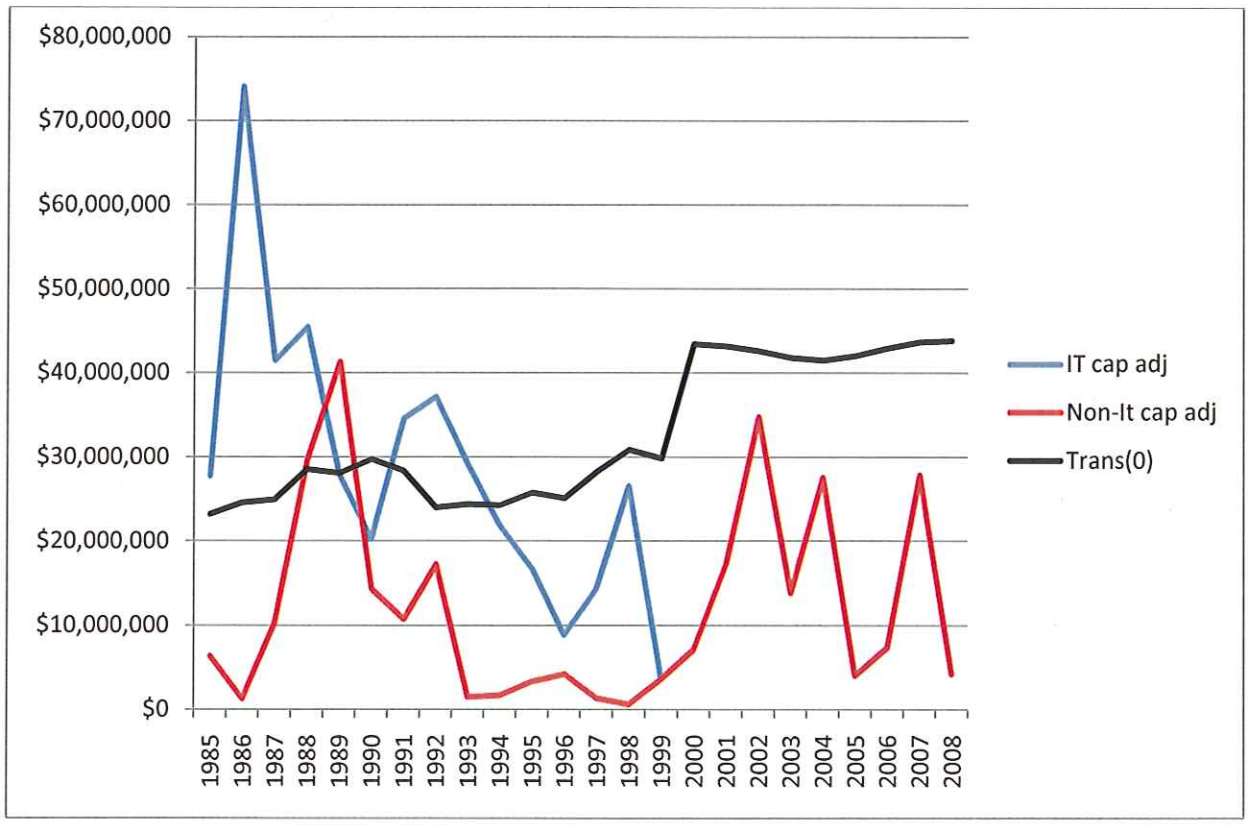
Data Analysis

Analysis of Data on the Impact of SSA's Investments in Information Technology



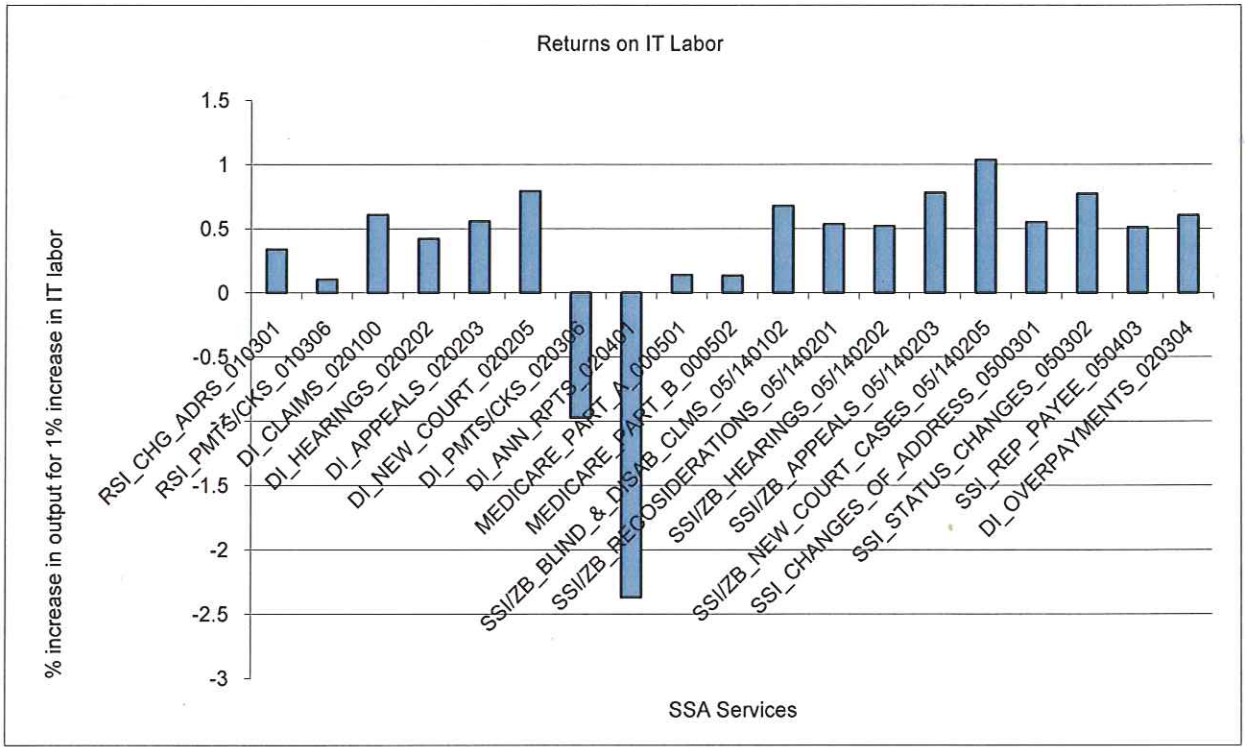
The contribution of IT to SSA
IT Capital and Work Years
(Capital in 1985 dollars)
Figure 1

Figure 1 shows a large investment in IT from 1985 to 1990 and a reduction in personnel work years. After 1990 IT investment shows high variability while work years produced by the agency remains fairly constant. Given increasing workloads, there is evidence that the combination of IT and human capital have made it possible to handle an increasing workload with the same human effort. (*This information is based on the data SSA provided.)*



IT Capital and Transactions
(Capital in 1985 dollars)
Figure 2

Figure 2 provides further evidence of the productivity from investing in information technology. A combination of routine transactions (not associated with disability determination) shows a steady upward trend while the number of workers at SSA has decreased during the period. (*This information is based on the data SSA provided.)*



Returns on IT Labor for
Various Transactions
Figure 3

Figure 3 shows an analysis of returns from SSA's investment in information technology workers (IT Labor) for select transactions. IT labor develops the applications and systems that the agency uses to accomplish its mission. The data suggest that an investment in technology and systems as measured by IT labor has shown a positive return for SSA. (*This information is based on the data SSA provided.)*

Data Analysis: the Electronic Medical Records Experiments

The Massachusetts' DDS MEGAHIT Experience with Beth Israel Deaconess Medical Center

- **Processing Times** - as of 07/30/2009
- DDS overall average case processing time is 86.3 days
- DDS average processing time for HIT cases is:
  - 63.3 days for unfavorable decisions/denials from DDS assignment to the adjudicator
  - 34.5 days for allowances from DDS assignment to the adjudicator

- **The Virginia DDS MEGAHIT Experience with MedVirginia**
  - **Processing Times** - as of 07/29/2009
  - DDS overall average case processing time is approximately 81 days for Title II and 87 days for Title XVI claims
  - DDS average processing time for HIT cases is:
    - 51 days from DDS receipt of the case
    - 25 days from DDS assignment to the adjudicator

These data show that electronic medical records can dramatically reduce the processing time for disability claims. Since not all data are yet available electronically, electronic medical records and a National Health Information Network have great potential for reducing disability claim processing times and improving service to SSA clients. (*This information is based on the data SSA provided.)*

- **Our conclusion is that information technology offers the best hope for providing outstanding service to SSA constituents from "baby boomer" retirees to applicants for disability.**
- **Forecasting future technology trends, we believe that the SSA should move to the Internet for as many interactions with constituents and within the Agency as possible.**

Scenario

The scenario illustrates how the public might interact with the agency if SSA implements the panel's recommendations.

At Birth

- Mary is born
  - The hospital automatically creates an electronic birth record by extracting data from both parents' records
  - The hospital's actions establish a permanent Electronic Medical Record (EMR) for Mary
- Enumeration at birth electronic message from the hospital- to SSA with data and biometrics - 95%
- SSA establishes an account for Mary and sends parents login and temporary password
- Parents applying online at a later time
  - Verification by electronic message from state bureau of vital statistics- 5%

Employment

- Mary gets a job
- Employer verifies SSN via eVerify- 100%
- Employer reports her wages each year or quarter
  - Employer withholds FICA
  - 100% electronic including small business
- Mary accesses her SSA account at her discretion to check earnings and to use benefits calculator
  - SSA does not need to send annual statements any longer

Marriage

- Mary finally gets married
- To change a name a married person:
  - Accesses her online SSA account 90%
  - Calls the SSA 800 number- 5%
  - Visits a field office and uses the self-service kiosk - 5%
- Mary switches from using her PC to access SSA to a smart phone

Mary becomes a widow

- Mary access www.socialsecurity.gov to find out about her and their children's eligibility for survivor benefits
- SSA receives death notice from funeral director or state bureau of vital statistics electronically
- SSA sends Mary an email with explanation of benefits
- SSA begins to deposit new benefits electronically in her bank account

Disability

- Mary becomes disabled and applies for disability benefits online-90%
  calls the 800 number – 5%
  visits a government service center -5%
- SSA gathers required documents electronically using the National Health Information Network
  - Network consolidates records from Health Information Exchanges
  - HIEs rely on electronic medical records
  - Interfaces to other systems from insurance companies
- Mary initiates a Google Wave meeting with SSA to discuss her disability
- SSA has been a lead agency in setting standards for Health IT and subsidizing the creation of the National Health Information Network

Alternative online filing

- Mary downloads apps to her iPhone to file for disability
- The apps guide her through the application
  - They contact her health care providers electronically and arrange for electronic submission of medical and other documents to be sent in with the claim

Disability determination

- SSA examiner uses Mary's information along with database of prior determinations
- Decision support tools provide recommendations
  - Statistical analysis and AI programs gather information on similar cases and their outcomes and report to examiner
  - 90% of cases are determined automatically
    - Positive decisions are not reviewed
    - SSA staff reviews rejected claims

In case of an appeal

- The first hearing is with an ALJ, the claimant and an attorney using Google Wave
- Face-to-face hearings occur depending on the case backlog and the outcome of the Wave conference
- A scheduling system assigns cases in backlogged areas to areas that are more lightly loaded for video hearings
- Decision support for the administrative law judge
  - Statistical and AI programs search the database of appeals to report on similar cases and their outcomes

Going back to work

- Mary recovers sufficiently to return to work
- Employer and Mary notify SSA electronically

Inheritance

- Mary receives an inheritance from her favorite Aunt
- Mary goes to a financial planner
- With Mary's authorization, the financial planner accesses Mary's SSA account electronically
  - Includes SSA benefits in developing her estate and retirement plans

Widow's benefits

- Mary turns 60
- Applies electronically as a widow
- Receives monthly cash payments for surviving spouse age 60 and over

Retirement

- Mary retires filing for benefits online -90%
  - Or via the 800 number – 5%
  - Or at a government service center- 5%

Medicare

- SSA notifies Mary electronically she should sign up for Medicare
- Mary learns online about different options
- Mary selects her options and notifies SSA electronically – 90%
  - Or via another channel- 10%